Mollusca Quiz Outline (Life Sciences 11)

SUMMARY:

1. Describe the anatomy of a mollusc.
2. What is the function and location of the mantle? Mantle cavity? Shell? Visceral mass? Foot?
3. What germ layer is the mantle derived from? What germ layer are the gills derived from? What germ layer is the digestive system derived from?
4. Describe the digestive system of the mollusc. Include the following words in your description: mouth, anus, torsion, radula, complete gut, visceral mass
5. What is torsion? Why has it been evolutionary conserved? (i.e. why is it advantageous for torsion to occur?) What taxon/taxa is torsion found in?
6. What is the purpose of a radula? Where is it located?
7. Describe the life cycle and reproduction of a mollusc, generally.
8. Compare and contrast the respiratory system of terrestrial and aquatic molluscs.
9. What is the overall function of a circulatory system? Compare and contrast an open circulatory system with a closed circulatory system. Which molluscan taxa would we find open circulatory systems vs closed circulatory systems?
10. Describe the nervous system of a mollusc. What germ layer is the nervous system derived from?
11. Compare and contrast bivalves, gastropods, and cephalopods.

STRUCTURE OF QUIZ:

This quiz will be worth approximately 20 marks in total. It is entirely multiple choice.

VOCABULARY:

(Disclaimer: This is not meant to be an exhaustive list. Vocabulary words may appear on the test that are not in this list.)

- Kingdom Animalia
- Phylum Mollusca
- Class Bivalvia

    - Filter feeder
    - Mucous string
- Class Gastropoda
    - Torsion
    - Mucous gland
- Class Cephalopoda
    - Closed circulatory system
    - Chromatophore
- Anatomy:
    - Head
    - Mantle
        - Epidermis
        - Shell gland
        - Mucous gland
    - Mantle cavity
    - Shell
        - Calcium carbonate
    - Visceral mass
    - Muscular foot
- Skeleton:
    - Endoskeleton
    - Exoskeleton
    - Hydrostatic skeleton
- Germ layers
    - Endoderm
    - Mesoderm
    - Ectoderm
- Symmetry:
    - Bilateral symmetry
    - Asymmetry
    - (Radial symmetry)
- Digestive system:
    - Complete gut
    - Torsion
    - Radula
    - Mouth
    - Anus
- Respiratory system:
    - Lungs
    - Ctenidia (gills)
    - Nudibranch
- Circulatory system
    - Open circulatory system

    - Closed circulatory system
    - Heart
    - Vessels
    - Diffusion
- Nervous system
    - Ladder-like nervous system
    - Neuron
    - Ganglion
- Words from squid dissection:
    - Beak
    - Ink sac
    - Pen (internal shell of the squid)
    - Siphon
        - Jet propulsion
    - Arm
    - Tentacle

VOCABULARY NOT TESTED

- Aplacophora
- Monoplacophora
- Polyplacophora
- Scaphopoda
- Basic body plan words
    - Coelom
    - Intestine
    - Stomach
    - Gonad
    - Digestive gland
    - Crop
    - Nerve cord
    - Liver
    - Mantle artery
    - Cecum
    - Posterior vena cava
    - Gill heart
    - Siphon
    - Jaw
    - Salivary duct
    - Cerebral ganglia
    - Genital pore
    - Penis
    - Vagina
    - Oviduct
    - Dart sac
    - Vas deferens
    - Kidney
    - Renal pore
    - Nerve ring
    - Venom gland
    - Proboscis
    - Harpoon sac
    - Trochophore larvae
    - Veliger larvae
    - Annelid
    - Radial marginal growth
    - Interstitial fluid
    - Auxiliary heart

- Tubular heart
- Hemolymph
- Hemocoel
- The names of the different ganglia on the nervous system slide (e.g. buccal, cerebral, etc)
- Incurrent siphon
- Labial palp
- Excurrent flow, incurrent flow
- Frontal lobe
- Optic lobe
- Radial muscle

PRIMARY STUDY MATERIAL:

- Mollusca Powerpoint
- Squid Lab
- Class notes and worksheet
- Textbook pg 585-593